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A NOTE FROM PRESIDENT TOM WEILAND

Every day brings us closer to our first Public Observation Session (POS) of 2013. As you read this issue of the Observer we are only about a month or so away from our first session out at Sugar Grove Nature Center (SGNC). Our first POS is scheduled for March 9, from 7:00 to 9:00 p.m. The topic that evening will be "Jupiter and The Galilean Moons." Please note that our policy regarding cancellation of a POS has changed slightly. A POS event will no longer be cancelled only because of overcast skies. We discovered last year that we were still having good turnouts for our presentations even when it was overcast, so now we will cancel only if it is actually raining. Besides the regular evening presentation we will also be continuing the tours of the observatory while sharing some of the recent work of our dedicated astrophotographers.

It's never too soon to start looking ahead at our POS schedule to make sure that your calendar is open for these great family events, so take a peek at our website at www.tcaa.us to review the dates and topics. I would also ask you to please help us with our goal of community outreach by inviting friends and family to one or more of our POS at SGNC. Word of mouth is a great way of spreading the interest in our events.

Finally, I want to encourage all TCAA members to attend the 53rd Annual TCAA Dinner Meeting scheduled for Saturday evening, February 23rd. Vice President Dave Osenga will be chairing the meeting and will conduct the evening program. Additional information regarding the meeting can be found in this issue of the Observer and at our website. I again apologize for being unable to attend as a result of an unavoidable change in previously arranged group travel plans. Clear Skies!!

TCAA'S 53RD ANNUAL MEETING FEBRUARY 23RD

The 53rd annual business meeting and banquet of the Twin City Amateur Astronomers will take place on Saturday, February 23rd, at the Normal Township Hall, 304 E. Mulberry Street in Normal. Participants should arrive at 6:00 p.m., and the banquet begins at 6:15 p.m. Free parking is available in back of the building and on the adjacent street. There is also a small parking lot across the street. You need to be traveling westward on Mulberry St. (a one-way street) in order to gain access to the location. The purpose of the Annual Meeting is to elect this year's Board of Directors, listen to officer reports, witness award presentations, and hear a guest speaker.

Our guest speaker this year will be Mr. David Leake. Mr. Leake is currently the director of the William M. Staerkel Planetarium at Parkland College in Champaign where he has been sharing the sky with kids of all ages for over 23 years. David also co-founder and President of the Champaign-Urbana Astronomical Society, and is current secretary for the Friends of the University of Illinois Observatory. He's currently serving as president of the Great Lakes Planetarium Association. His talk will be titled, "The Observatory at the University of Illinois: Past, Present and Future."

This year, like last year, we will have a buffet-style banquet meal provided by Rick McCormick of Redbird Catering. The menu consists of the following: fried chicken, baked potato with butter and sour cream, rolls and butter, sliced carrots, fruit salad, and iced tea and coffee. Cake will be served for dessert. Plates, plastic utensils, cups, and napkins will be provided.

Reservations for the banquet are due online at <http://www.tcaa.us/AnnualMeeting2013.aspx> by Thursday evening, February 14th. The cost of the banquet is \$20 per adult and \$10 per child; payment must be made at the door to Treasurer Duane Yockey.

If for any reason you make reservations but are not able to attend, please cancel your reservations with Lee Green <lee@starlightsoftware.com> not less than three days in advance of the event. Failure to cancel reservations in a timely manner might result in billing for the cost of the banquet.

TCAA members are invited to attend both the business meeting and the follow-up talk starting around 7 p.m. at no charge. No reservations are required for either, only the banquet. Many thanks to Vice-President Dave Osenga for making arrangements for the hall and the catering.

The *OBSERVER* is a monthly publication of the Twin City Amateur Astronomers, Inc., a registered 501 (c)(3) non-profit educational organization of amateur astronomers interested in studying astronomy and sharing their hobby with the public.

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Submission deadline is the first of each month.

Membership Dues

Individual Adult/Family \$40
Full-time Student/Senior \$25
Electronic Newsletter \$25

To join the TCAA, send your name, contact info and dues payment to
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CALL FOR NOMINATIONS

Each year, at the club's Annual Meeting, the membership elects a Board of Directors to serve for the next 12 months, and members are recognized for their service to the club and observing prowess. This February it will be no different. The TCAA membership is hereby reminded that nominations are needed for the 2013-2014 Board of Directors, and nominations will still be accepted during the February annual business meeting. An election for the next Board will then follow.

As a legally incorporated entity operating under the laws of Illinois, a Board of Directors (consisting of 5 elected members) manages the operations of the club. When elected, these 5 individuals select from among themselves the next president and vice president of the club. The group then appoints or re-appoints major officers (secretary and treasurer) and minor officers (ALCor, official registered agent, historian, property manager, etc.)

AMENDMENT APPROVED FOR CONSIDERATION AT ANNUAL MEETING

In compliance with Bylaw requirements, the TCAA membership is hereby put on notice that an amendment to the Bylaws will be brought up for a vote at the February Annual Meeting. This amendment redefines the duties of the position of Property Manager that will allow for delegation of responsibilities for buildings and equipment. The proposal's language was approved at the Board of Directors meeting on January 8. It reads as follows:

The Property Manager has responsibility and oversight in two areas – buildings and equipment. Responsibilities include security and maintenance of structures and equipment, disposition of equipment, and inventory. Security of structures includes assurance that all locks and lighting (inside and outside) of the observatory structures are maintained and replaced as needed. Maintenance of property includes inspecting and clearing areas in and around the properties to maintain a safe environment and assuring that the observatory structures are clean, organized and structurally sound. Usable equipment will be organized to be readily accessible for use by TCAA members following procedures for checkout and return recommended by the Property Manager and approved by the Board. Any member intending to utilize equipment which has been determined to require training for use (either by the Board or the owner of the equipment) must fulfill those requirements to the satisfaction of the Property Manager or a designee. The Property Manager may dispose of old, broken or unused equipment as approved by the Board. An updated inventory of all purchased, donated, checked out or disposed of equipment will be maintained and forwarded annually (January) to the Board prior to the TCAA annual meeting. The Property Manager will maintain an inventory of key holders to TCAA properties. The Property Manager may request assistance in the conduct of the position's responsibilities and assign duties to volunteer members as required.

TCAA BOARD MEETING—JANUARY 8, 2013

The TCAA Board meeting was held at the office of Duane Yockey on January 8, 2013. President Tom Weiland called the meeting to order at 6:30pm. In attendance were Board members Tom Weiland, Dave Osenga, Paul Pouliot and Dan Miller, and members Bob Finnigan, Lee Green, Tim Stone, Carl Wenning and Duane Yockey.

The minutes of the previous Board meeting were approved without changes as was the Treasurer's report. Duane noted that the operating fund balance was smaller than at this time last year. He suggested that with reoccurring expenses and ongoing activities, we are maintaining slim margins and should be realistic about our expenses. We discussed several ideas for improving our operations including the dues structure and the costs associated with printing the newsletter. It was suggested that the matter be tabled pending further information.

Turning to old business, we discussed the Roll Off Roof Observatory (RORO). Tom spoke with Angela Funk and reported that multiple meetings had been conducted with site planners and that drainage was one current concern, and that Angela would notify us when additional information was available. The Construction Agreement and Lease Agreement were reviewed and approved pending a few minor changes. Carl and Tom will transmit the updated agreements to the Funks Grove Cemetery Association when the changes are complete and re-approved by our Board. Duane asked if estimates for our required insurance payments were available, but until the building is completed, the cost of the insurance premium will not be finalized.

No additional activities were reported in the training and installation of telescopes at Illinois Wesleyan University.

Dave reported that arrangements were nearly complete for the Annual Meeting to be held on for Feb. 23, 2013 at the Normal Township Hall. We discussed the cost for the event and agreed that we would ask \$20 for adults and \$10 for children. Dr. Christopher Powell will be our speaker and he will discuss some of his archaeological activities in Central America. Dan will forward his vita to Carl and to Lee for inclusion in materials for the event. Lee agreed to create a signup page in the club's website so that people can register. Duane agreed to contact those people on our mailing list so that they have the option to join us.

Lee reported that our inventory list was nearly complete, but was not ready for distribution. The Board asked Lee to identify any obsolete equipment and to dispose of those items which were not salvageable. Lee agreed to do this and promised to consult with available member during the process. In a related topic, the Board reviewed a new description of the duties of the Property Manager. These changes were approved by the Board and will be printed in *The OBSERVER* and raised as a topic for discussion by the members at the Annual Meeting.

Carl reported that we will hold an event at the ISU Planetarium on Saturday January 19. While Planetarium director Tom Wilmitch did not have any new programs, Carl suggested a talk about the Year of the Comets and will lead us in that activity.

Tom reported that Tony communicated that little progress had been made refurbishing the 6" refractor. Carl reported no response to his announcement of a course on astrophotography.

The Board wanted to identify a slate of candidates for next year's Board. Tom, Dave, Paul, Dan, Tony and Lee all indicated their willingness to serve. Other names were also discussed, but their willingness to serve could not be determined. Having received no nominations for the annual awards, it was decided that none would be bestowed this year.

Bob noted that the purchase of a new camera to be installed in the RORO would take over three months to be delivered. He suggested that with the anticipated approvals for the construction of the RORO, it was time to place the order for the camera. The Board concurred and directed Duane to disburse \$9000 from the Observatory funds for this purchase.

The Board scheduled the date of the meeting of the new Board of Directors to be on March 5 at Duane's office.

Tom noted several recent developments including the Night Sky Network award to the TCAA of a Sunspotter. Carl reported that he has been in contact with Vivian Hoette, the director of outreach for Yerkes Observatory and that he would see if he could arrange an appropriate event with her. Lee announced that the ISU Family Science Day would be held Saturday April 13 and received commitments from members to assist in having a TCAA presence there. Lee will make those arrangements. Dan announced that he will be hosting the National Sigma Zeta Conference at Millikin University on March 21 and 22, and requested assistance from members for observational sessions which will be scheduled on those evenings, weather permitting. Dave announced that he had recently visited the Johnson Space Center in Houston and that he would write an article for the Observer to share his experiences.

The meeting adjourned at 8:11pm.

Respectfully submitted,

Lee Green, Secretary

JANUARY E/PO: TCAA MEETS AT ISU PLANETARIUM

The club's first education/public event outreach event took place on Saturday, January 19th when Carl Wenning gave a "by invitation only" presentation *2013: Year of the Comets*. The program started in the ISU Planetarium at 7:30 pm with a 20-minute constellation and sky motions talk. The group of approximately 27 members and guests then moved to 210 Moulton Hall to view a PowerPoint about comets, and to seem simulated motions of Comets PANSTARRS and ISON. Following these activities, Carl provided everyone with a 2-page handout describing what, when, where, why, and how to observe the two comets. Both of these comets are expected to make 2013 quite memorable, and possibly this generation's most memorable. TCAA members and guests from this past summer's public observing sessions at Sugar Grove Nature Center. Thanks and "a tip 'o the hat" to planetarium director Tom Willmitch for making this event possible.

PSO AND MEO UPDATES

Tom Weiland forwarded the latest versions of the construction agreement and observatory lease to FGCA's President Linda Bristow just after the January 8th Board of Directors meeting. We were hoping to hear back from her prior to the January 28th meeting of the Funks Grove Cemetery Association whose approval is needed before construction can proceed. As of this date (January 31) we have not heard back from FGCA to the knowledge of this writer. Also needed are approvals by the Funks Grove Nature Center Board, and an environmental impact study by the Illinois Prairie conservation commission before final approval can be obtained for a construction permit. Lastly, concerns for potential flooding and run-off must be addressed with plans for mitigation. What will this cost and who will pay for any additional work has yet to be determined. How long all these will take before the project receives final "go ahead" and who will pay for what is anyone's guess.

Dr. Linda French has contacted the club about TCAA astrophotographers training IWU students on the newly installed pier, telescope, and camera at Mark Evans Observatory. To date the sky has been overcast every evening as it is wont to do at this time of year. As soon as the sky begins to clear, Carl Wenning will marshal those experts who have agreed to assist in this effort and get them together with IWU students at the MEO for training.

POS SCHEDULE FOR 2013

Coordinators have been arranged for the POS schedule during 2013. Dates, time, and topics are listed below. The topics were detailed in the October issue of *The OBSERVER*. If you would like to assist with these presentations, be certain to contact the coordinators noted below.

Date	Time	Topic	Coordinator
Mar 9	7:00 pm – 9:00 pm	<i>Jupiter and the Galilean Moon</i>	Dave Osenga
Apr 20	8:00 pm – 10:00 pm	<i>Our Marvelous Moon</i>	Carl Wenning
May 11	8:30 pm – 10:30 pm	<i>The Expanding Universe</i>	John Werner
Jun 8	9:00 pm – 11:00 pm	<i>Astronomical Curiosities of Saturn</i>	Tom Weiland
Jul 6	9:00 pm – 11:00 pm	<i>The World's Great Telescopes</i>	Tom Weiland
Aug 10	8:30 pm – 10:30 pm	<i>Meteors, Space Rocks, and Comets</i>	Carl Wenning
Sep 7	8:00 pm – 10:00 pm	<i>Births and Deaths of Stars</i>	Lee Green
Oct 5	7:00 pm – 9:00 pm	<i>Our Galaxy, the Milky Way</i>	Lee Green

ARIF HIDAYAT ARRIVES FROM INDONESIA

Carl Wenning's friend, Arif Hidayat, arrived here from Indonesia on January 22nd. He is on leave from his university in Bandung to spend 5 months with the ISU Physics Department to learn more about its physics teacher education program. Arif comes to us from Bandung, West Java. Bandung is located about 80 miles east-southeast of the national capital Jakarta. On his way here, Arif passed through Singapore and Istanbul. Carl visited Arif and his physics department at Indonesia University of Education (UPI) in October 2011.

After taking an introductory astronomy course as part of his undergraduate education at UPI in 2002, several physics education students decided to start an astronomy club at UPI. They named the club 'Cakrawala' which means firmament.

A new earth and space science laboratory came into existence in Bandung during 2001. Now, the facility has two telescopes, a Schmidt Cassegrain (28cm, f/10) with a ST-237 CCD camera, and a Celestron SC1100 with a CGE mount and a CCD camera. They also have a portable helios (a device that shows the layout of the solar system) and planetarium, a sky quality meter and other demonstration equipment.

Today the club continues as a student organization (<http://cakrawala-upi.blogspot.com/>). It holds periodic open houses where school groups sometimes visit, and supports physics education department activities such as an open house for Mercury's transit, teacher workshops on introduction to astronomy, an Astronomy Olympiad, and eclipse and planetary observations.



Indonesia has a long history of astronomical observations, starting long ago with the use of quadrants by traditional Islamic institutions. Today, astronomy is taught widely in high schools, and the government supports observations for determination of the start and end of the holy month of Ramadhan. There is only one astronomy department in all of southeast Asia, and it is at the Bandung Institute of Technology which was founded about 60 years ago.



THE BRIGHTER PLANETS FOR EARLY 2013

- ★ Planet Mercury makes an appearance in the western evening sky this month. On February 16th, the speedy little planet will reach greatest elongation at 18.1° east of the sun. At that time it will shine at a magnitude of -0.4, and will be directly above dim Mars. Many amateur astronomers have never seen Mercury. Have you? Look for Mercury 30 minutes after sunset around this date very low in the west-southwest.
- ★ Venus continues as the 'Morning Star' in the east until March. After superior conjunction on March 29th it will appear in the evenings in the west for the rest of the year.
- ★ Currently, Mars appears low in the west-southwest in the early evenings. It will move lower each evening, and will be at superior conjunction on April 18th. Shortly thereafter it will re-appear in the morning sky, very low in the east.
- ★ Jupiter was at opposition on December 3, 2012, and will, therefore, continue to dominate the evening skies during the early part of 2013, being visible until the end of May when it disappears into the glare of the sun.
- ★ Saturn started the year as a morning object. It continues to rise earlier and earlier each day now, and by March it will be rising by around 11 p.m. It will reach opposition on April 28th when it will be visible all night.

2013: THE YEAR OF THE COMETS

What follows is information provided by Carl Wenning about Comets PANSTARRS and ISON that really might light up 2013 and make it memorable as the year of the comets. While comets are notoriously fickle and forecasting what they will look like subject to error (Who can forget Comet Kohoutek of 1973-74?), Carl is in the process of preparing more extensive information such as how to observe the comets (especially the dangerously close day-time passage of Comet ISON near the sun on November 28th). Carl also wants to include information about the crescent moon passing in front of the tails of both comets, leaving an apparent gap in their tails. What follows is the substance of a handout provided to those who attended his presentation on January 19th. Stay tuned...

Comet PANSTARRS

Comet C/2011 L4 (PANSTARRS) is a non-periodic comet discovered in June 2011 using the Pan-STARRS telescope located near the summit of Haleakala, on the island of Maui in Hawaii. This comet will first be visible low in the west-northwestern sky to the unaided eye for a short time after it passes closest to the sun in March 2013. Throughout most of its apparition, however, it will be best observed with a telescope or binoculars.

Comet C/2011 L4 had an apparent magnitude of 19 when it was discovered in June 2011. By early May 2012, the comet had brightened to magnitude 13.5, and could be seen visually when using a large amateur telescope from a dark site. As of October 2012, the coma (expanding tenuous dust atmosphere) was estimated to be about 120,000 km in diameter. An estimate from October 2012 predicts the comet may brighten to apparent magnitude -4 (roughly equivalent to Venus near its brightest) but this will be when the Comet is too close to the sun to be readily viewed by earthbound observers.

March 5, 2013. Comet PANSTARRS passes closest to Earth at distance of only 163 million kilometers. (The average earth-sun distance is about 150 million kilometers.) At this time the comet appears to the left of the sun and it sets at about the same time as the sun.

March 10, 2013. The comet passes closest to the sun at 45 million kilometers – as close as the planet Mercury is to the sun. Comets are typically brightest and most active around the time and shortly after they are closest to the sun. The comet is located to the upper left of the sun at sunset and is probably still too close to the sun to be observed during early twilight.

Mornings, late March 2013. The comet should be visible in low in our *eastern morning sky* starting around March 24. It will get higher with each passing morning, moving through the constellations of Andromeda and Cassiopeia. Its tail will point away from the Sun. As the comet pulls away from the Sun its nucleus and tail rapidly dim. The comet, because it approaches the Sun from the south and moves rapidly northward becomes visible in both the morning and evening skies almost at the same time.

Evenings, late March 2013. The comet should be visible in the *western evening sky* shortly after sunset starting around March 24. It will get higher and dimmer each evening during March 2013 as it moves away from the Sun, most of its motion will carry it to the right above the horizon line (northward). During this time it will move through the constellation of Pisces and into the constellation of Andromeda. At this time, the comet might have a gas and possibly a dust tail, hopefully both tails will be visible to the unaided eye. Best views of this comet probably will be had in the morning, so don't miss those opportunities.

April 12, 2013. The comet is now far enough north in the sky to become circumpolar for central Illinois observers. As a result, the comet should be visible somewhere in the north throughout the night even though it will be rather faint at this time.

Throughout April 2013. The comet will fade as it moves farther from the sun and back out into the depths of space. Comet C/2011 L4 probably took millions of years to come from the Oort cloud. After leaving the planetary region of the solar system, the post-perihelion orbital period is estimated to be about 110,000 years.

(Continued on page 7)

2013: THE YEAR OF THE COMETS (CONT.)

(Continued from page 6)

Comet ISON

Comet C/2012 S1 (ISON) was discovered on September 21, 2012, beyond the orbit of Jupiter. It almost immediately created a sensation in the astronomical community because the comet holds the promise of becoming so bright that it could be visible in the daytime sky on Thanksgiving Day! Amateur Russian observers, Vitali Nevski and Artyom Novichonok, working as part of the International Scientific Optical Network (ISON), discovered the comet. A series of quick observations revealed its orbit. During its closest approach to the sun, Comet ISON will be just 680,000 kilometers from the solar surface. This is extremely close, and comets that pass that close to the sun do not always survive, breaking up and melting instead. The great question for Comet ISON, is whether or not it will survive this fiery brush with the sun.

Assuming that it does survive, Comet ISON will likely become extraordinarily bright and visible, even in the daytime sky. Its chances are fair, as comets often survive even closer approaches than this. After approaching the sun, the comet will next pass near us, just 65 million kilometers from Earth.

The comet should be visible to the naked eye starting sometime in late October or early November, and will remain visible, if it survives its fall toward the sun, until January 2014. After that it will return to the outer solar system, where it will probably disappear forever due to its slightly hyperbolic orbit.

Pre-perihelion: The comet will be visible in the predawn eastern sky as moves from the constellation Leo into the constellations Virgo and Libra. Because Comet ISON travels eastward among the stars and parallel to the ecliptic on its inward path to the sun, it passes closest to Mars on October 17, Spica on November 18 (comet +2.8 mag), Mercury on November 23 (comet mag +0.8), and Saturn on November 24 (comet mag +0.2). It disappears into the glare of the sun the next day and will reappear from the glare of the sun after December 1 – though its tail could be visible in twilight a day or two before that. The comet should be an easy naked-eye object from November 16 through December 24, especially if observed about 45 minutes or more before sunrise. The comet might also be visible very low in the western evening sky just before Christmas.

Perihelion daytime sky: Just past noon Central Standard Time on Thursday, November 28, (Thanksgiving Day!) the Comet is expected to reach its greatest brightest – an unimaginable *negative* 13 magnitude and as bright as the full moon – while passing only about one quarter degree to the lower left limb of the sun moving in a clockwise direction. Clearly, great caution will be required for daytime observations of this comet when it is in the vicinity of the sun. Telescopic viewing will be dangerous without proper precautions. Comet ISON's motion will be so rapid that within 30 minutes of time its change of position relative to the sun will be easily detectable. Depending on its brightness, the head of the comet might be visible near the sun in the daytime sky for a day or two either side of perihelion. Observations made nearer sunrise and sunset might be just as or even more profitable than those made around midday.

Post-perihelion morning sky: Almost immediately after Comet ISON passes perihelion, it will appear roughly north-northwest of the sun in the sky. Therefore it will be visible both before sunrise and after sunset for short periods of time starting with the morning sky. Even though its brilliant head will not be visible in the east for a few more days, its tail should extend northward from the sun and roughly in the direction of the North Star. Fortunately, Earth's moon will be at new phase around this time and will not interfere with observations. By December 3, the comet's head will appear above the eastern horizon at the start of nautical twilight (about one hour before sunrise). The comet appears to move away from the sun toward the upper left with its tail preceding it. If observers are fortunate, they will observe both dust and gas tails on this comet. The head of the comet continues to diminish in brightness and the tail to disappear.

Post-perihelion evening sky: By December 16, the comet's head will appear above the western horizon at the end of nautical twilight (about one hour after sunset). The comet's motion at this time will be roughly parallel to the horizon and it will gain altitude very slowly as it moves to the north in the sky. The evening apparition is not expected to be as rewarding as the morning apparition of this comet, so be certain to get up early to view this event.

Best evening and morning viewing will occur in dark location with a horizon relatively free of obstructions. Binoculars will assist in bringing out the details of this celestial interloper. For the best views, get out earlier than necessary during the mornings, and star observing shortly after sunset in the evening. Even if the comet's head is below the horizon at these times, the tail could shine brightly enough to extend well above the horizon and you'll not want to miss viewing this while the sky is still dark. For improved views still, try to view from a location outside of the city so that artificial lights don't hinder observations.

ASTROBITS

- ★ Carl W. completed his Herschel II observing program on January 4th. He now has 12 observing programs complete and is within three observations of completing the advanced level of the Planetary Nebula observing program. He currently holds the basic program certificate for planetary nebulae.
- ★ Late last semester, a transfer student from Harper College started an astronomy club at Illinois State University. Misa Fioretto is founder and president, and we look forward to working with her and this new group. Carl is scheduled to give a *2013: Year of the Comets* talk to this group in the next few weeks.
- ★ The most recent issue of *Reflector* included encouragement to follow the League on Twitter and Facebook, a special League discount on 2013 Planetary Society calendars and a call for the volunteer assistant editor position for the *Reflector*.
- ★ Welcome to new members Jeff Michels from Bloomington and Michael Starasta of Lincoln, IL. Might this be the same Mr. Starasta who was a TCAA member many years ago?
- ★ Nicholas Hughe, an independent software developer, amateur astronomer, and avid NASA supporter, recently released an astronomy iPad app called Spacebook: <http://itun.es/us/JqfmJ.i>. As a fellow astronomy lover, he thought we might find it interesting. He built this app so we could better enjoy browsing NASA's wonderful photos to raise awareness about the importance of the space program and raise money for science education in the process. He is looking to donate a portion of the proceeds from this app to a worthy cause.
- ★ Kenneth Crepas, a short-term member of the TCAA along with his son back in the 1990s, passed away at 66 years of age on January 24th.
- ★ Carl Wenning ran into former TCAA member Neil Lehmkuhl recently. Neil, you might recall, won that Russian reflecting telescope years ago when the club held a raffle to assist the ISU Planetarium. Neil is still working at Mitsubishi Motors, and Carl invited him to join us some time for an evening under the stars.

HOW TIME FLIES

TCAA Historian Carl Wenning provides monthly updates about the history of the club going back to intervals of 50, 25, and 10 years. Details about all mentioned events will be found in either the club history (<http://www.tcaa.us/History.aspx>) or in *The OBSERVER* archive found on the club's web site (<http://www.tcaa.us/Observer.aspx>).

50 Years Ago

February 1963 – Club members have been reporting on observations of Comet Ikeya-Seki. Nova Herculis has also been observed. David Williams has made a number of magnitude estimates, and has watched the nova fade rapidly.

25 Years Ago

February 1988 – The club's Annual Meeting was held on February 20th at ISU's Moulton Hall. A group photograph was taken. Carl Wenning was inducted into the G. Weldon Schuette Society of Outstanding Amateur Astronomers. At that same meeting Carl received Lifelong Honorary Membership.

10 Years Ago

February 2003 – The banquet speaker for the Annual Meeting was Dr. Rick Martin, Chairman of the Physics Department at Illinois State University. Our meeting was held in Stevenson Hall at ISU. Jim Swindler, also a professor at ISU, writes another article in his series of historical vignettes – this time focusing on Galileo.

TCAA Treasurer's Report – January 2013

OPERATING FUND BALANCE – December 31, 2012 - \$ 1,328.72

Income

Allan Timke (Dues) - \$ 40.00

Expenses

LYB Inc. (Observer copies & postage) - \$ 47.33

OPERATING FUND BALANCE – January 31, 2013 - \$ 1,321.39

OBSERVATORY FUND BALANCE – December 31, 2012 - \$12,612.89

Income

Interest - \$ 1.48

Expenses

Woodland Hills Camera - \$ 9000.00

OBSERVATORY FUND BALANCE – January 31, 2013 - \$ 3,614.37

TOTAL TCAA FUNDS – January 31, 2013 - \$ 4,935.76

Respectfully submitted,

L. Duane Yockey, Treasurer

CONSTELLATION OF THE MONTH: HOROLOGIUM—THE PENDULUM

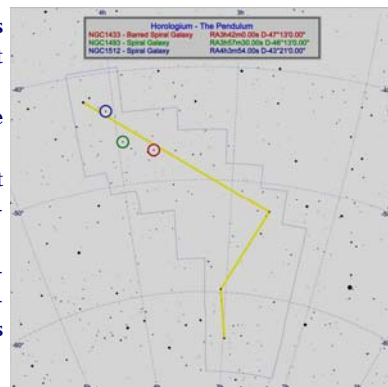
Horologium is a small, dim constellation created by LaCaille to commemorate the invention of the pendulum clock. The brightest star in Horologium is 4th magnitude. Horologium lies east and south of Eridanus and extends past the bright star Achernar.

There is no mythology associated with Horologium and none of its stars are named.

Horologium is the 58th largest constellation covering 249 square degrees. It is the 83rd brightest (6th dimmest) constellation. Horologium reaches opposition on November 19.

Located away from the Milky Way, Horologium contains a number of interesting galaxies. NGC1433 is a bright barred spiral galaxy. NGC1448 is an edge-on spiral galaxy and NGC1493 is a beautiful face-on spiral galaxy. NGC1512 is another barred spiral galaxy with a small nearby companion NGC1510.

Horologium contains several Mira-type Long Period Variable stars whose magnitudes vary over 6-10 magnitude ranges with period up to and exceeding 1 year.



MISSING OUT ON TCAA ACTIVITIES & EVENTS?

If you are missing out on club activities or celestial events, be certain to join the TCAA listserv. Many activities are planned at the last minute, and announced only hours in advance through the club's listserv. Reminders about celestial events are also broadcast to the membership through the club's listserv. To join this free service by Yahoo, send a blank email to TCAA-subscribe@yahogroups.com. Unsubscribing is just as easy. To unsubscribe, just send a blank email to TCAA-unsubscribe@yahogroups.com.

To keep up to date on celestial events not described in *The OBSERVER* or addressed in the listserv, visit Carl Wenning's observing page at www.phy.ilstu.edu/~wenning/observing_page.htm. It has been recently updated to include an extended sky calendar of events as well as additional space weather and satellite viewing links.

The OBSERVER

Newsletter of the TCAA, Inc.

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Are your dues due?



The Dues Blues?

If you see a check in the box above, it means your dues are due. To retain membership, please send your dues renewal to our esteemed Treasurer:

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Normal, IL 61761**